CITY OF LODI

COUNCIL COMMUNICATION

AGENDA TITLE: Pedestrian Crossing on Cherokee Lane, Vicinity of Hale Road, Discussion and Appropriate Action

MEETING DATE: May 1, 1991

PREPARED BY: Public Works Director

RECOMMENDED ACTION: That the City Council discuss the pedestrian crossing issue on Cherokee Lane in the vicinity of Hale Road and take the appropriate action.

BACKGROUND INFORMATION: At its meeting of April 17, 1991, the City Council requested that staff prepare a report on possible pedestrian crossing improvements on Cherokee Lane in the vicinity of Hale Road. Due to the Council Communication deadlines, a full report is not included in this memo, but will be provided to the Council and interested citizens prior to the meeting. The report will discuss:

Existing conditions
Accident history
Possible improvements including - improved signs and markings
flashing beacons
pedestrian-activated signal

FUNDING: None at this time.

Jack L. Ronsko
Public Works Director

Prepared by Richard C. Prima Jr., Assistant City Engineer

JLR/RCP/mt
rcp

APPROVED: Thos. A. Peterson
THOMAS A. PETERSON
City Manager

CC-1

CCHEROK2/TXTW.02M (CO.COM) April 18, 1991

CITY OF LODI

COUNCIL COMMUNICATION

AGENDA TITLE: Pedestrian Crossing on Cherokee Lane, Vicinity of Hale Road, Discussion and Appropriate Action

MEETING DATE: May 1, 1991

PREPARED BY: Public Works Director

RECOMMENDED ACTION: That the City Council review the following study and take the appropriate action.

BACKGROUND INFORMATION: At the request of City Council, staff has accelerated the study of pedestrian safety across Cherokee Lane at Hale Road. Staff began this study due to the citizen complaints and accident reports received. Background information regarding school age pedestrians is attached as Exhibit A. This Caltrans material discusses pedestrian and driver characteristics as well as general guidelines in analyzing pedestrian problems.

Existing Conditions

° Physical Characteristics (Exhibit B)

This "T" intersection is controlled by a stop sign on Hale Road at Cherokee Lane. A marked pedestrian crosswalk exists on the south leg of this intersection across Cherokee Lane. Pedestrian crossing signs and pavement legends exist at both approaches to this crosswalk. Street lights on both sides of Cherokee Lane at this intersection were installed in April of 1987 by the City as the result of citizen complaints and a traffic study. The land use along Cherokee Lane is commercial; however, Hale Road leads into a residential area with over 140 single and multiple residential lots. The other access to this area is Delores Street, approximately 1,700 feet to the south.

° Accident History (Exhibit C)

A summary of available accident records from 1987 to the present is shown in the table below. The results of the summary indicate that 6 pedestrians were struck by vehicles while crossing Cherokee Lane. Four of these pedestrians were between the ages of 10-13 years old. The two other pedestrians were 20 and 31 years old. In addition to the pedestrians struck by vehicles, 3 others were not struck, but involved in the accident such as a vehicle stopped for a pedestrian being rear-ended by another vehicle. All 9 of these pedestrian-related accidents occurred on a weekday between the hours of 2:00 p.m. and 7:00 p.m.

APPROVED: _____

THOMAS A. PETERSON
City Manager

ACCIDENT TYPE	1991 (TO PRESENT)	1990	YEAR 1989	1988	1987	TOTAL
PEDESTRIANS STRUCK	2	0	2	0	2	6
PEDESTRIANS INVOLVED	1	0	0	0	2	3
OTHER ACCIDENTS (NON-PEDESTRIAN RELATED)	0	2	2	3	5	12
TOTAL ACCIDENTS	3	2	4	3	9	21

° Pedestrian Count

A pedestrian count was performed on Friday, April 19, from 3:00 to 5:00 p.m. This is the time period that the market in the area felt the most pedestrian activity occurred. This also is within the time period that the pedestrian accidents occurred as shown in the accident study. The results of this survey are shown below.

TIME (PM)	PEDESTRIANS (CROSSING CHEROKEE LANE)	VEHICLES (THROUGH CROSSWALK)
3:00 - 3:30	13	733
3:30 - 4:00	16	789
4:00 - 4:30	22	772
4:30 - 5:00	14	750
TOTALS	*65	3,044

*Approximately 70% or 45 of the 65 pedestrians observed were elementary school age

° Volumes/Speed

Traffic counts show that volumes on Cherokee Lane and Hale Road are approximately 16,500 and 900 vehicles per day, respectively. The existing posted speed limit on Cherokee Lane 35 mph. The prima facie speed limit on Hale Road is 25 mph.

Alternatives

Staff has developed some possible actions to increase pedestrian safety. These alternatives are listed below.

Alternative A - Install larger pedestrian crossing signs and improve crosswalk markings. The existing 30-inch pedestrian crossing signs at this location are standard per State of California (Caltrans) guidelines. Thirty-six-inch signs are also available. Due to the large number of businesses and advertising signing along Cherokee Lane, traffic signs are difficult to see. The location of the pedestrian signs at this crossing is shown on Exhibit A. In addition to larger signs, the crosswalk bars can be widened from 12 inches to 24 inches and crosshatching added for improved driver visibility of crosswalk.

The cost of installing larger signs and modifying the crosswalk is approximately $350.00.

Alternative B (Exhibit D) - Install a flashing yellow beacon to supplement the existing pedestrian signs and markings. A flashing beacon is designed to alert motorists of pedestrian activity in the area. The State of California (Caltrans) provides guidelines for the installation of flashing beacons at uncontrolled school crossings. Although not directly applicable here, the guidelines have been used at this location for comparison. At an uncontrolled school crossing, these guidelines are satisfied when there are at least 40 elementary school age pedestrians using the crossing and 200 vehicles traveling through the crossing during each of any two hours. The results of the survey are shown below.

TIME (PM)	PEDESTRIANS OBSERVED	/	PEDESTRIANS NEEDED PER GUIDELINES	VEHICLES OBSERVED	/	VEHICLES NEEDED PER GUIDELINES
3:00 - 4:00	20	/	40	1,522	/	200
4:00 - 5:00	25	/	40	1,520	/	200

As shown above, the number of school age pedestrians are below the 40 per hour indicated in the guidelines for the installation of a flashing beacon. Adult crossing guard guidelines for school areas also were not satisfied.

The cost of installing a flashing beacon is approximately $10,000.

Alternative C (Exhibit E) - Install a mid-block pedestrian-actuated crossing signal across Cherokee Lane between Hale Road and Maple Street. A pedestrian-actuated crossing signal would provide maximum safety for pedestrians short of an overcrossing or tunnel. The cost of a pedestrian crossing signal is approximately $60,000. The signal would be actuated by pedestrian push buttons. When a pedestrian pushes the button, the traffic controller will search for an adequate gap in traffic. When the adequate gap is found, the signal will stop vehicle movement and allow the pedestrian(s) to cross. This is similar to a traffic signal at an intersection except that this is designed for a mid-block installation. If the pedestrian crossing signal is placed at this location, it may also be desirable to

replace the existing depressed curb with square-type curbing to protect the signal posts on both sides of Cherokee Lane. The parking lot at the market on the west side of Cherokee Lane may also need some striping modifications to divert traffic around the signal pole. These improvement costs are unknown at this time and are not included in the $60,000 estimate shown.

State of California (Caltrans) traffic signal guidelines were also checked for the intersection of Hale Road and Cherokee Lane. The intersection met State guidelines for a traffic signal; however, per our 1990 Traffic Signal Priority Study, 16 of the 21 intersections studied rank higher on the list. These guidelines are used to determine if a traffic signal should be considered. Meeting the State guidelines does not necessarily mean that a traffic signal should be installed at an intersection. These guidelines would be satisfied at many of the remaining unsignalized intersections along Cherokee Lane. The cost of installation of an intersection traffic signal is approximately $100,000.

Discussion

The manager of a business in the area indicated that this crosswalk is used by young and adult pedestrians throughout the day. The destinations of these pedestrians are a variety of locations due to the mix of residential and commercial uses on both sides of Cherokee Lane. During staff's survey, the majority of pedestrians observed were customers of Star Market on the west side of Cherokee Lane across from Hale Road. There is an arcade at this market that draws younger customers.

Staff has also recently compiled City-wide pedestrian accident data from 1987-1990. The results of this data indicates that Cherokee Lane has the highest number of pedestrian accidents of any other streets. Locations with 3 or more are:

LOCATION	# PEDESTRIAN ACCIDENTS (1987 THRU 1990)
Cherokee/Eden	5
Locust between Central and Garfield	4
Cherokee/Hale	3
Cherokee/Locust	3
Cherokee/Elm	3
Lodi/Church	3
Pine between School and Sacramento	3

The majority of these accidents occurred at the intersections of Eden Street, Hale Road, Elm Street, and Locust Street. All of the pedestrian accidents in this time period have been plotted on a large map that will be available for viewing at the Council meeting or prior to the meeting at City Hall, Traffic Division.

Recommendation

Due to the relatively high number of pedestrian and pedestrian-related accidents, congestion, and relatively high speeds at this location, staff feels additional pedestrian protection is appropriate.

Staff does not recommend a mid-block pedestrian-actuated traffic signal at this location due to its proximity to side streets. The distance between Hale Road and Maple Street is only approximately 120'. This could create problems for drivers turning left from these side streets because their attention will be focused on entering Cherokee Lane and they may not see the traffic signal. Also, the required placement of the overhead traffic signal (40' from crosswalk for visibility by stopped drivers) may cause drivers to stop at the intersection instead of at the crosswalk. Drivers normally associate a traffic signal with an intersection. These mid-block pedestrian signals are better suited for locations that are not close to side streets.

Staff feels an overhead flashing beacon at this location would provide additional indication of pedestrian activity to drivers without giving pedestrians a false sense of security.

FUNDING: Funding for Alternative A would be from the Street Maintenance Account. Alternatives B and C would require an appropriation from a capital account (additional discussion would be needed).

Jack L. Ronsko
Public Works Director

Prepared by Richard C. Prima, Assistant City Engineer, and Rick S. Kiriu, Senior Engineering Technician

JLR/RCP/mt

cc: Police Chief
Street Superintendent
Assistant Civil Engineer-Traffic
Affected Businesses and Concerned Citizens

SCHOOL AREA PEDESTRIAN SAFETY

INTRODUCTION

Traffic accidents involving the injury or death of pedestrians are one of the most critical problems confronting Traffic Engineers. This traffic issue arouses significant emotion and public indignation when the pedestrians are school-age children. Parents and civic leaders are persistent in their demands for more signs, markings, signals, and crossing protection in and around school areas and other locations which attract children.

Accident statistics indicate that children are more often involved in nonschool related accidents. This may be indicative that the standard treatments prescribed for traffic control around school facilities are effective. More effort is apparently spent on providing protection for children than on teaching them how to protect themselves. Adherence to these uniform standards and safety provisions is apparently a critical contributing factor to improving the overall pedestrian accident problem.

The standards and the guidelines presented herein relate to school pedestrians, in grades Kindergarten through 12th. They are presented separately from the general application and design of traffic control devices because of the special nature of the school pedestrian.

This is Chapter 10 of the Caltrans Traffic Manual, and is also published separately for easy reference.

GENERAL PROVISIONS

Need for Uniformity

As with other forms of traffic control, uniformity in application and operation of traffic control devices around school facilities promotes the orderly and predictable movement of traffic. It is especially significant that motorists understand and comprehend their responsibilities as they are typically more mature, aware, and experienced in traffic situations than young school pedestrians.

There are many instances where school area controls were installed as a result of emotional requests from parents or school officials. Many of these controls are not only unnecessary, but costly to maintain. More importantly, the lack of respect accorded the unwarranted control lessens the respect for traffic control devices in general. Thus, it is necessary to stress that traffic controls for pedestrians in school areas must be uniformly applied on the basis of established guidelines combined with sound engineering studies. Care must be exercised to avoid the pitfalls of overreacting to the emotional demands for excessive traffic control devices.

From an engineering standpoint, the problem of traffic control and operation in school areas is one of evaluating approved devices while taking into consideration child-pedestrian behavior and driver reaction. To fully appreciate the fundamental criteria for school area protection, it is necessary to understand the behavior of both the young pedestrian and the adult driver.

The following information has been excerpted from the Federal Highway Administration publication "Traffic Control Devices Handbook". The conclusions and viewpoints expressed are based on various national research projects.

Characteristics of Young Pedestrians

Research on the behavior of children as pedestrians and the extent of their perception and judgment in a traffic situation shows that children from 6 to 16 years of age are generally inattentive and careless in crossing streets. Behavior studies indicate the following general characteristics of this age group:

- Physical Perception: Peripheral vision is not as well developed in children as in adults.
- Physical Stature: The small stature of children under 9 years old (3.6 feet average) presents difficulties in their seeing oncoming vehicles beyond parked cars as well as difficulties for the drivers in seeing these small pedestrians.
- Use of Crosswalks: About two-thirds of the children will use a marked crosswalk at an uncontrolled intersection. The percentage increases at signalized intersections. When non-student crossing guards are present, almost all children use the crosswalk.
- Use of Traffic Signals: Only two-thirds of the young pedestrians will cross on the green indication where crossing guards are not present. With crossing guards, nearly all young pedestrians cross on green. With pedestrian-actuated signals, less than half will actuate the signal, and will cross during gaps in traffic if crossing guards are not present.
- Use of Over or Underpasses: Children between age 5 and 16 will generally use over or underpasses when a crossing guard is nearby or when fences channel them to the crossing.

The lack of attention to the traffic situation is a major factor in accidents involving children. Sixty percent of the children involved in accidents did not see the vehicle. Seventeen percent of the accident victims under 14 years of age had either run into the roadway, appeared suddenly in the path of the vehicle, or crossed from between parked cars.

From another viewpoint, the young pedestrian that is not generally involved in accidents may be characterized as follows: goes to school with friends, goes the same way every day, selects the route taken because it is short, and would change the route if told to by parents. In the trip to school, this type of youth crosses three or more streets at nonsignalized crossings; crosses one or more streets with a policeman, crossing guard, or student patrol present; does not cross in the middle of the block; crosses when there are no cars in sight; was told how to cross the street safely by parents; knows it is safer to walk across the street than to run; would run out into the street to save a child or animal; would cross a signalized intersection when the light is green; thinks a marked crosswalk at the corner is a safer place to cross than mid-block or an unmarked crosswalk; feels safer going home from school than to school; and is more worried about being hit by a car when it is dark.

The youngest pedestrians, age 9 and under, are involved in more than their share of accidents. Kindergarten through third grade students have considerable difficulty understanding and properly using school area traffic signals and crosswalks. They are more likely to cross midblock or against a red signal than older students. The young pedestrian at each age level considers the location with a crossing guard or student patrol the safest place to cross.

Driver Behavioral Characteristics

Usually, the driver using roadways surrounding school facilities is a local resident driving to work. A typical composite shows that the driver has a child between the ages of 5 and 9 and is aware of the school area—not because of signing but because of familiarity with the area. The driver knows that the legal speed limit through the school zone is between 15 and 25 miles per hour, but is nevertheless driving through the zone between 31 and 35 miles per hour. The driver does not perceive the existing signs unless there is a flashing beacon associated with a speed sign, and is not aware of the intent of the traffic signs. Even though the driver is aware of the flashing beacon and speed sign, he will not slow down for the school zone unless he perceives a potential hazard. Driver behavior studies have concluded that vehicular speeds in school zones are reduced only when children are visible, crossing guards are visible, or when police enforcement is evident.

Given the characteristics of the young pedestrians and the attitudes and perceptions of the typical driver traveling through school zones, it becomes obvious that uniform traffic control devices properly applied and enforced are needed to protect young pedestrians.

Protective Measures

The protection of the school pedestrian is the shared responsibility of parents, school administrators, traffic officials, civic leaders, and vehicle drivers. There is little doubt that programs in the home and school to train the child as a responsible pedestrian are an important factor in improving safety. The following sections address the current practices in applying uniform measures to safeguard young pedestrians. Such protective measures include safe walking routes, signs, markings, signals, pedestrian separation structures, adult crossing guards and school safety patrols.

Exhibit B

CITY OF LODI

PUBLIC WORKS DEPARTMENT

CHEROKEE LANE VICINITY OF HALE ROAD EXISTING CONDITIONS

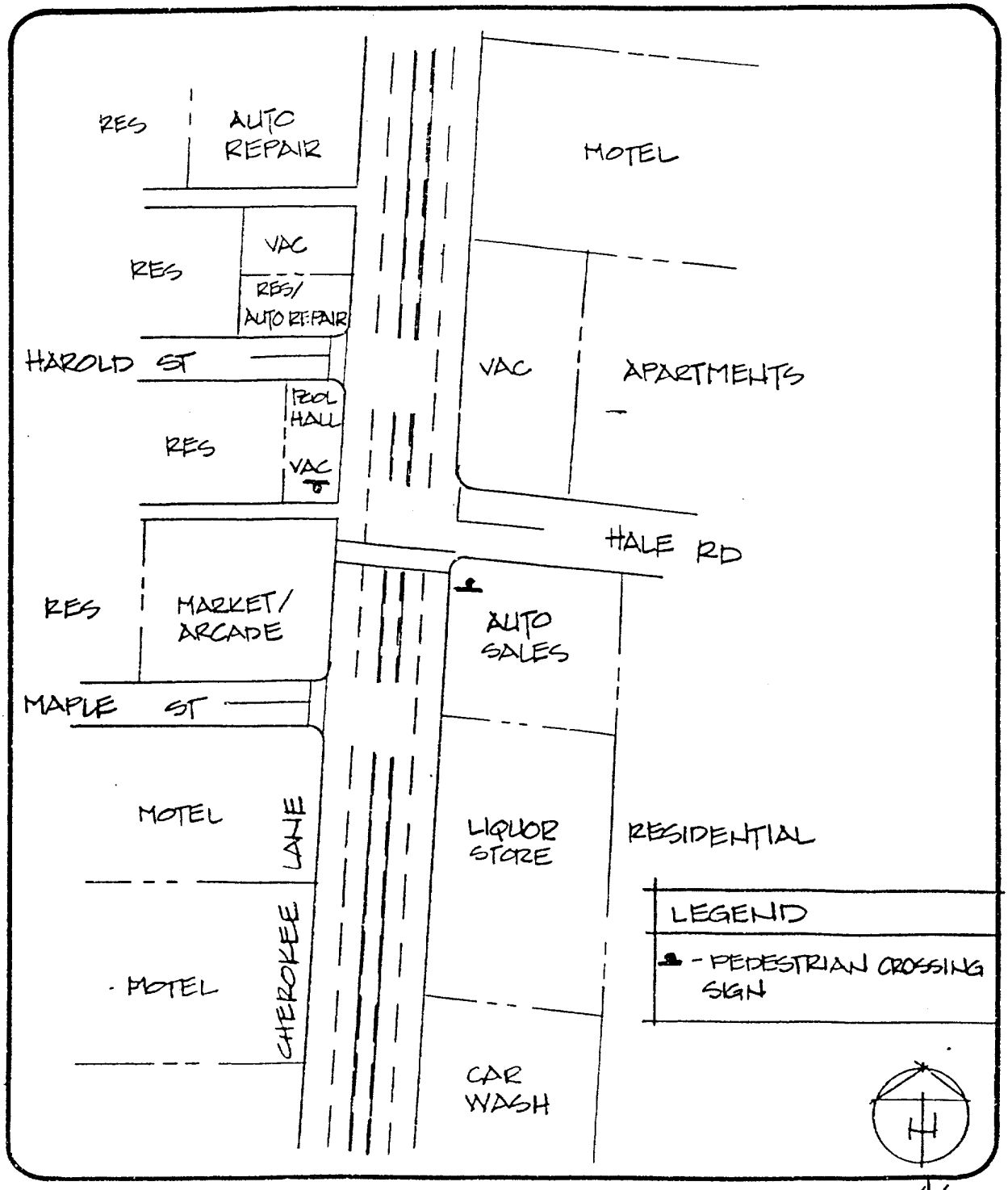

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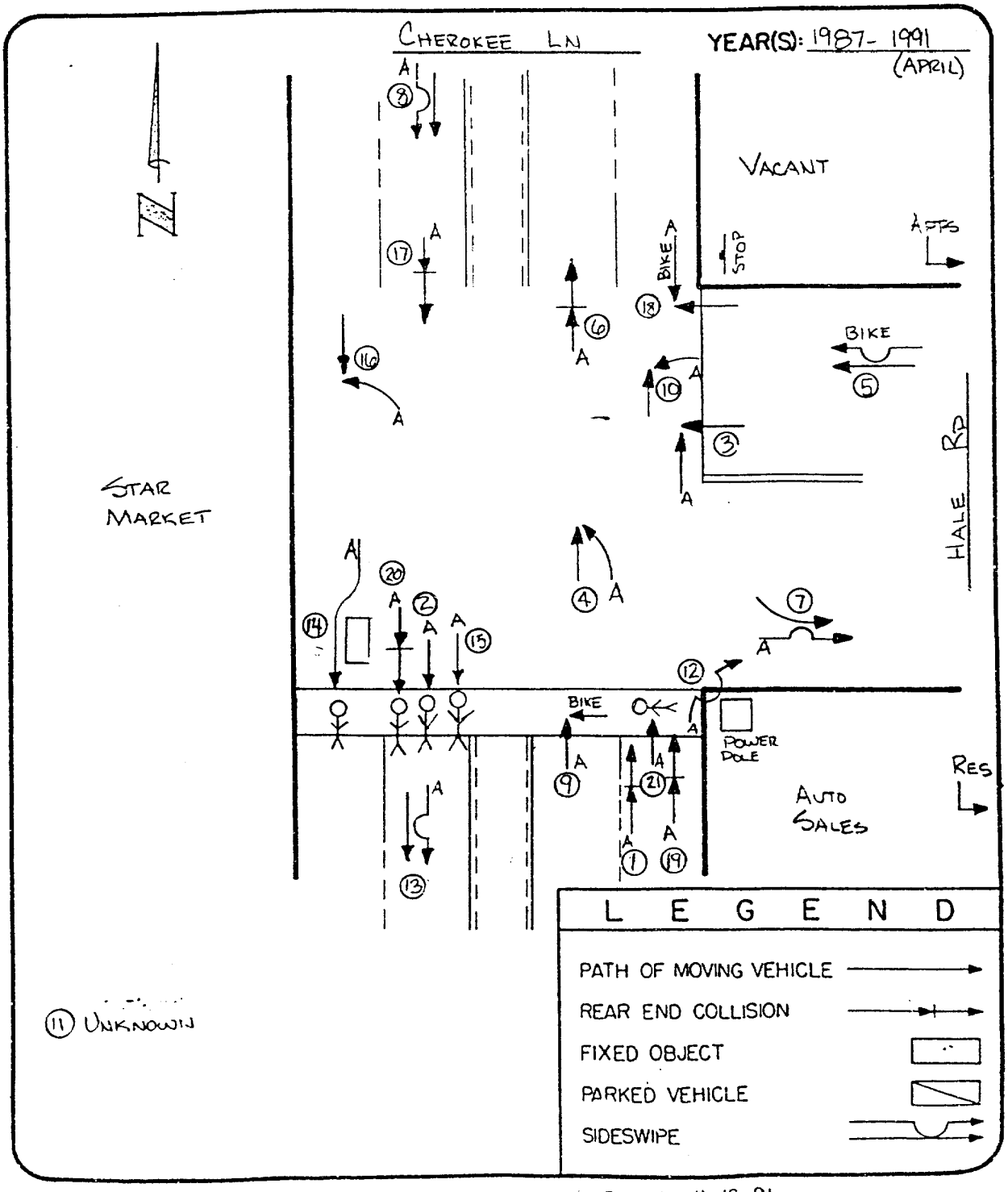
Exhibit C

CITY OF LODI

PUBLIC WORKS DEPARTMENT

Collision Diagram
Intersection Of
CHEROKEE LN and HALE RD



DATE: 4-19-91

LOCATION: CHEROKEE & HALE YEAR(S): 1987 - 1991 (APRIL)

PD #	No.	DATE	TIME	DAMAGE	INJURED	APPARENT CAUSE (A)
87-446	1	1-9-87	1715	MIN - MIN	0	UNSAFE SPEED, INATTENTION - STOPPED FOR PED
87-704	2	1-14-87	1840	MIN	1	FAILURE TO YIELD (DRVR DID NOT SEE PED)
87-3950	3	3-12-87	1643	MOD-MOD	0	UNSAFE SPEED (DRVR LOST CONTROL AVOIDING PED)
87-4284	4	3-18-87	1929	MOD - MOD	1	UNSAFE U-TURN (DRVR DID NOT SEE OTHER VEH)
87-4320	5	3-19-87	1300	NON - UNK	1	IMPROPER LEFT TURN BY BICYCLE
87-11916	6	8-2-87	1026	MOD - MOD	0	UNSAFE SPEED DRVR FELL ASLEEP
87-12852	7	8-19-87	1215	MIN - MIN	0	UNSAFE STARTING FROM PARKED POSITION
87-13894	8	9-5-87	1243	MAJ - MOD	0	UNSAFE LANE CHANGE (DRVR DID NOT SEE OTHER VEH)
87-18018	9	11-17-87	1720	MIN - MOD	1	UNK CONFLICTING STATEMENTS HBD
88-3395	10	3-1-88	1615	MOD - MOD	0	FAILURE TO YIELD, DID NOT SEE NB V
88-480	11	3-20-88	1530	MIN - NON	0	MISC SERVICE PERSON BACKED INTO PARKED VEH
88-19456	12	11-14-88	902	MIN	0	UNSAFE TURN - TRAILER HIT POWER POLE
89-6229	13	4-11-89	1006	MIN - MIN	0	UNSAFE LANE CHANGE
89-8829	14	5-19-89	2005	NON	1	FAILURE TO YIELD TO PED UNSAFE SPEED
	15	9-6-89	1716		1	FAILURE TO YIELD TO PED
89-18516	16	11-21-89	1813	MOD - MOD	2	FAILURE TO YIELD SB DRIVER HBD
90-420	17	1-11-90	636	MOD - MIN	0	FOLLOWING TOO CLOSELY FOG
90-12611	18	10-24-90	1153	MIN-MIN	1	RIDING BICYCLE ON WRONG SIDE OF ROAD
91-687	19	1-17-91	1503	MOD-MOD	1	UNSAFE SPEED (CLOCKED @ 47 MPH) STOPPED FOR PED
91-3873	20	4-5-91	1546	MAJ - MAJ	1	UNSAFE SPEED INATTENTION (REAR ENDED VEH HIT PED)
91-3856	21	4-4-91	1904	MOD	1	FAILURE TO YIELD TO PED

DATE: 4-19-91

Exhibit D

CITY OF LODI

PUBLIC WORKS DEPARTMENT

CHEROKEE LANE
FLASHING BEACON
ALTERNATIVE B

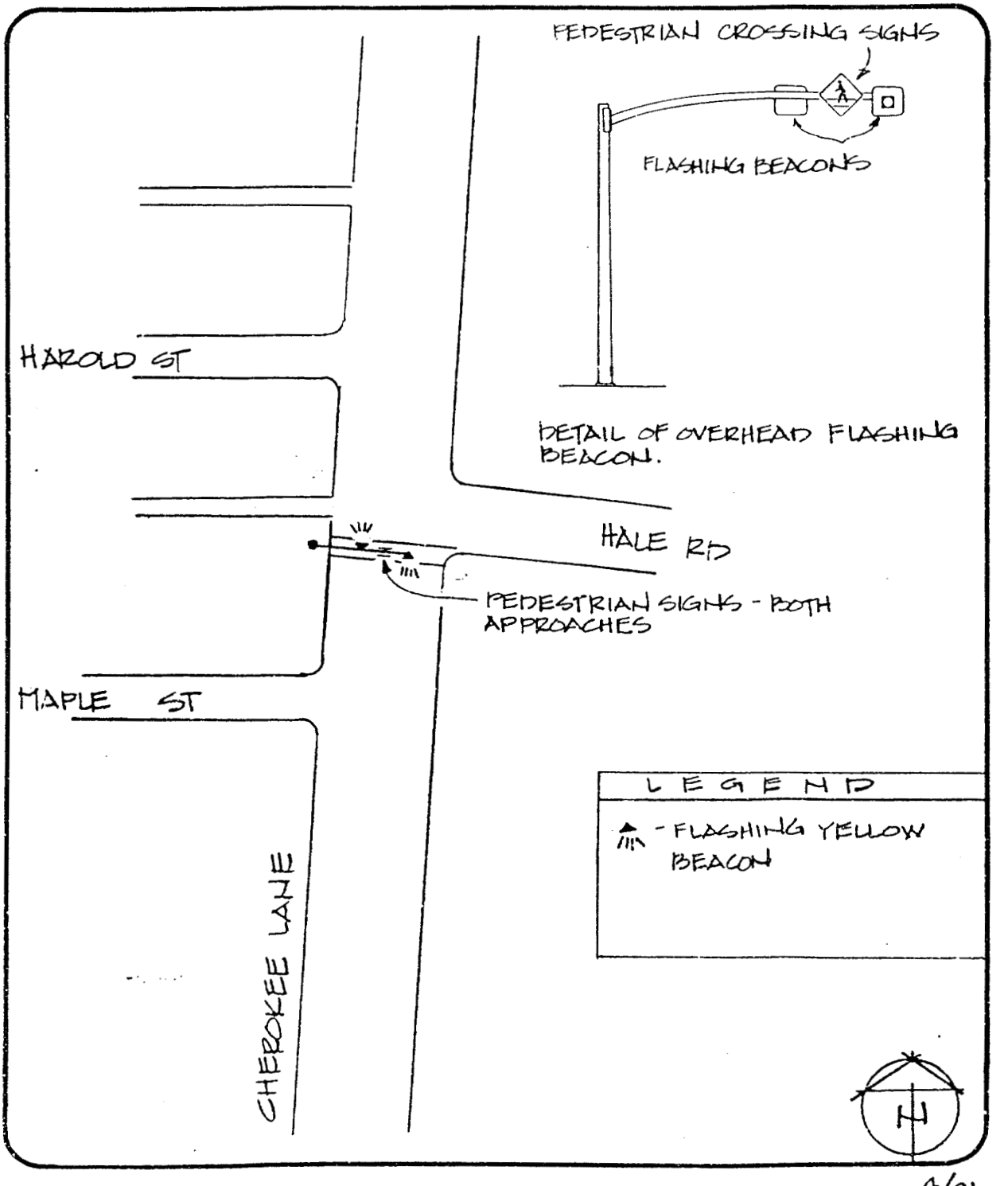


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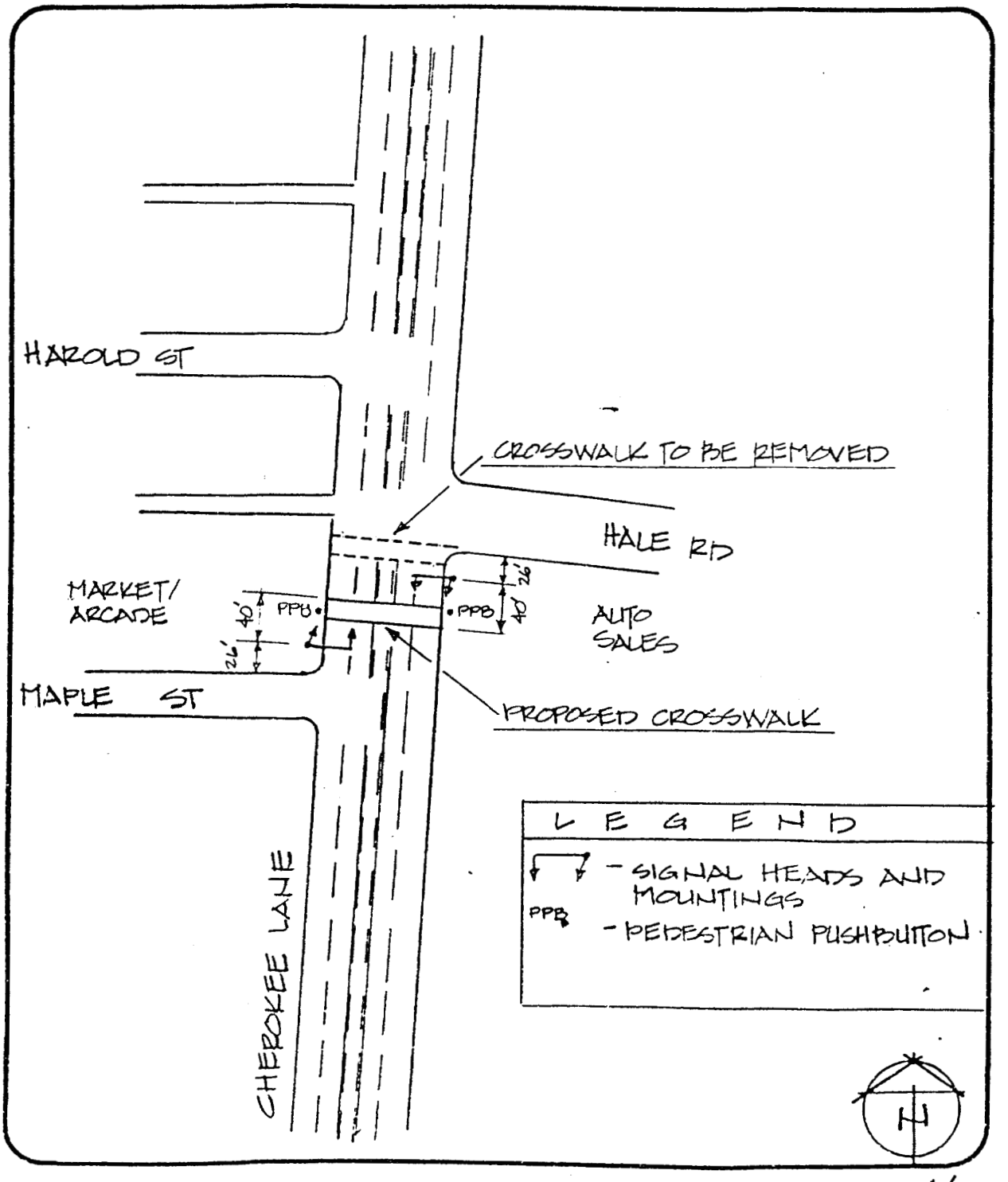
Exhibit E

CITY OF LODI

PUBLIC WORKS DEPARTMENT

CHEROKEE LANE
PEDESTRIAN ACTUATED TRAFFIC SIGNAL
ALTERNATIVE C



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#155

CITY OF LODI
SPECIAL ALLOCATION REQUEST

TO: Finance Director

DATE: May 15, 1991

FROM: City Clerk

PROJECT NUMBER: 124.0-501.02-506

Request is made for funds to accomplish the following project which was not included in the current budget:

Description of Project	Estimated Cost
Funding for the installation of a yellow flashing light at the crosswalk at the intersection of Cherokee Lane and Hale Road	$10,000

Funding source T.D.A. Funds

(If you need more space, use additional sheet and attach to this form)

Date of Approval - 5/1/91 Amount Approved - $10,000

Council XXXXX City Manager _____

FUND OR ACCOUNT TO BE CHARGED

Current Budget $_____ Prior Year Reserve $_____

Contingent Fund $_____ General Fund Surplus $_____

Capital Outlay Reserve $_____ Reimbursable Account $_____

Utility Outlay Reserve $_____ Other (~~Election~~) TRANSPORTATION DEV. FD $ 10,000

Hotel/Motel Tax Reserve -

General Fund Operating Reserve

Account Number

Robert H. Holm, Finance Director

Alice M. Reimche,
City Clerk

Submit this form in duplicate to the Finance Director. Distribution after approval will be as follows: 1) Originating Department 2) Finance Department

CITY OF LODI

CITY HALL, 221 WEST PINE STREET
P.O. BOX 3006
LODI, CALIFORNIA 95241-1910
(209) 334-5634
FAX (209) 333-6795

April 29, 1991

SUBJECT: Pedestrian Crossing on Cherokee Lane, Vicinity of Hale Road, Discussion and Appropriate Action

Dear Property Owner/Resident:

Enclosed is a copy of background information on an item that will be discussed at the City Council meeting on Wednesday, May 1, 1991, at 7:30 p.m. The meeting will be held in the City Council Chamber, Carnegie Forum, 305 West Pine Street. You are welcome to attend.

If you wish to communicate with the City Council, please contact Alice Reimche, City Clerk, at (209) 333-6702.

If you have any questions about the item, please call Richard Prima or me at (209) 333-6706.

Jack L. Ronsko
Public Works Director

JLR/mt

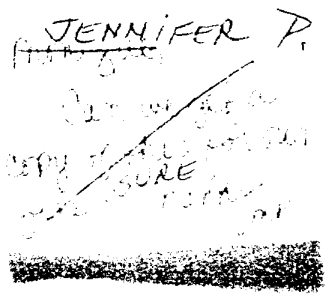
Enclosure

cc: City Clerk

LCHEROK2/TXTW.02M

CITY OF LODI

CITY HALL, 221 WEST PINE STREET
P.O. BOX 3006
LODI, CALIFORNIA 95241-1910
(209) 334-5634
FAX (209) 333-6795



May 15, 1991

Lodi Unified School District
Attention: Neil Schmidt, Superintendent
815 W. Lockeford Street
Lodi, CA 95240

SUBJECT: Cherokee Lane North of Hale Road - Request for Bus Stop Relocation

At the May 1, 1991 meeting, City Council discussed pedestrian safety across Cherokee Lane at Hale Road. During that discussion, a citizen living in the area commented on the traffic hazards school children are exposed to while waiting at the bus stop on the east side of Cherokee Lane north of Hale Road. We concur that it would be desirable to move the bus stop location.

Based on our discussions with citizens and field observations, some points to consider are:

- Sections of the street have no sidewalk (see attached map).
- To avoid large groups of children congregating at one location, multiple stops may be needed.
- Some residents have objected to bus travel in their neighborhoods in the past.

Due to the potential hazard related to children congregating along Cherokee Lane, we would like you to consider this request. Please advise us of your decision as soon as possible. If you have any questions or comments regarding this matter, please contact Jack Ronsko or Richard Prima at 333-6706.

David Hinchman
Mayor

DH/RCP/mt

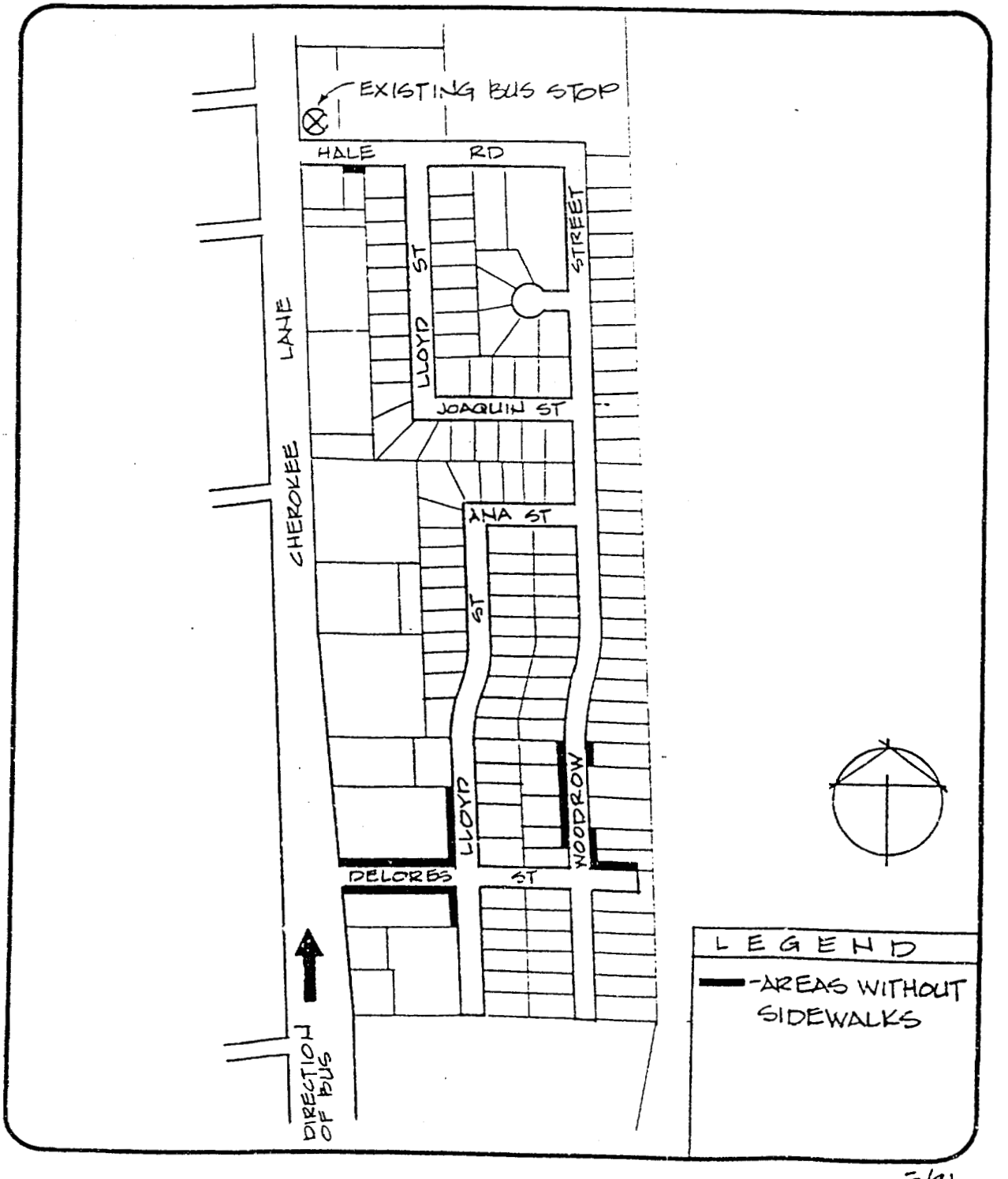
Enclosure

cc: Public Works Director
Assistant Civil Engineer-Traffic
LUSD Police Services - Biglow

CITY OF LODI

PUBLIC WORKS DEPARTMENT

CHEROKEE LANE
VICINITY MAP



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